IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

CONNECTEL, LLC	§	
Plaintiff	§	
	§	
vs.	§	**CASE NO. 2:04-CV-396**
	§	
CISCO SYSTEMS, INC.	§	
Defendant	§	

MEMORANDUM OPINION

This Memorandum Opinion construes the terms in United States Patent Nos. 6,016,307; 6,144,641; 6,454,594; and 6,473,404.

BACKGROUND

The '307 patent issued January 18, 2000. The '641 patent, a continuation of the '307 patent, issued November 7, 2000. The '594 patent issued September 24, 2002, also as a continuation of the '307 patent. The '404 patent issued October 29, 2002 as a continuation of the '641 patent. Thus, all patents share the same specification. The patents generally relate to routing optimization in a telecommunications switching system. The specification describes "a method and apparatus for dynamically selecting an optimal telecommunications path from a plurality of available paths in accordance with an analysis of both static and dynamically changing variables and user priorities." '307 patent, col. 1:7–10.[1]

The parties disagree about the very nature of the invention. ConnecTel contends the claims cover routing decisions for individual packets once a transmission network has been selected. Cisco

[1] All column and line references are to the '307 patent.

argues the claims are directed at the evaluation and selection of a transmission medium, or network type, for transferring data. ConnecTel and Cisco also disagree as to whether the measuring, analyzing, and determining steps occur in connection with transferring a particular data file or whether those steps generally occur in the "background" of a system without regard to data file transfer. These disagreements underlie many of the parties' claim construction arguments.

APPLICABLE LAW

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.*; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id*. Other asserted or unasserted claims can also aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id*. Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a

dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314–15.

Claims "must be read in view of the specification, of which they are a part." *Id*. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed. Cir. 1995)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id*. Also, the specification may resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. But, "although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998); *see also Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent.").

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting

C.R. Bard, Inc., 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition is entirely unhelpful to a court. *Id*. Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*.

The patents in suit also contain means-plus-function limitations that require construction. Where a claim limitation is expressed in "means plus function" language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112, ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112, ¶ 6 mandates that "such a claim limitation 'be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.'" *Id.* (citing 35 U.S.C. § 112, ¶ 6). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Id*.

Construing a means-plus-function limitation involves multiple inquiries. "The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id*.

A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id*. Moreover, the focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id*.

CLAIM TERMS

Telecommunications path, communications path,* and *data path

ConnecTel contends "telecommunications path," "communications path," and "data path" should be construed to mean "the physical and logical resources used to move the user data/traffic from one switch to another switch or one switch to or from a user, for example, a switch interface, its associated queues and a transport channel." Thus, ConnecTel argues the path includes more than just the transmission medium itself, but also includes the interface and associated queues.

As stated above, Cisco argues the determination of an optimal "telecommunications path" refers to a determination of a type of network over which to transfer the data as opposed to determining the optimal path within a network for data transfer. Cisco proposes the Court construe the terms to mean "a transmission medium (a network type such as POTS, leased lines, mobile cellular networks, digital links, fiber optics, satellite links, and private and public packet switching networks such as the Internet)."[2]

The Court agrees with and adopts Cisco's construction. Thus, "telecommunications path," "communications path," and "data path" are construed to mean "a transmission medium (a network type such as POTS, leased lines, mobile cellular networks, digital links, fiber optics, satellite links,

[2] POTS is "plain old telephone system." Col. 1:23–24.

and private and public packet switching networks such as the Internet)."

The specification teaches a method and apparatus for determining the best medium or network for transmitting data. Each interface is "interconnected with an associated telecommunications path capable of transferring a data file." '307 patent, claim 1, 8:13–16; 3:1–3. Figure 1 is a block diagram illustrating the telecommunications switching system. Col. 3:54–55. "The switching system 10 is connected to various telecommunications media in accordance with the user's resources." Col. 3:58–60. Specifically, the system may be connected to a high-speed T1 interface, a wide area network (WAN), a local area network (LAN), a POTS, or a wireless communications network. Col. 3:60–66. These interfaces are exemplary; "any number of the aforementioned interfaces may be used alone or in any combination as required by the user." Col. 3:66–4:4. For example, a user may be connected to common carriers such as MCI, SPRINT, or AT&T. Col. 4:4–8. A user may also configure a wireless interface for communication by various electromagnetic means, such as infrared, radio frequency, and the like. Col. 4: 8–11. Thus, the preferred embodiment is not limited to the particular mediums listed. However, the specification is clearly directed towards the selection of a particular network as opposed to routing decisions within a network. This also conforms with the specification's description of the prior art's deficiencies in which choices between different networks were being made (not routing with a network). Col. 1:11–2:37. Further, "an object of the present invention is to overcome the shortcomings of the prior art systems as described above." Col. 2:38–40.

The specification does not disclose the selection of an optimal route within a given network. The specification specifically contemplates that the paths are networks, not paths within a network. Repeated references are made within the specification to "paths" in which the path is considered to

be a network such as, the disclosed T1, LAN, WAN, POTS, and Wireless networks. For example the "path analysis block 24" makes an analysis of each of the different networks not an analysis within a network. Col. 4:12–23; Figure 1. Further, the routing optimization described within the specification is directed towards selecting one of the T1, LAN, WAN, POTS, and Wireless networks, and the specification describes this as a "path" selection "by employing the multi-protocol routing optimization of the present invention, the path chosen for transmission of a data file takes into account parameters which vary in real-time, thus not relying on a simple preprogrammed look-up table of low cost providers as in the prior art." Col. 5:3–8. Likewise the parameters of Table A and Table B of the specification are parameters of each network as whole as opposed to parameters of individual routes within a network and these parameters and the values derived from these parameters are repeatedly referred to as properties of the "paths." Col. 4:13–65; 5:12–6:9. Likewise the flowcharts of Figures 2 and 3 (which relate to choosing between the T1, LAN, WAN, POTS, and Wireless networks) are "flowcharts of the methodology employed by the present invention in arriving at the optimal choice for routing a data file amongst a plurality of available paths in accordance with the present invention." Col. 6:54–57. Also, a ping test can be used to test the latency for each path. Col. 6:1–9. "The ping routine sends a packet onto *the network* and obtains a value of the average delay encountered by that packet in reaching the destination and returning. Col. 6:4–7 (emphasis added).

Statements the Applicant made during prosecution of the '307 patent confirm this understanding of the medium is correct. The Applicant distinguished his system from a prior art system, Derby, that was concerned with "mov[ing] packets of information around a network faster":

> Derby is interested in network packet switching, once the data file has in fact been formatted in packets and provided to the network. The applicant's invention is

> intended to select an appropriate transmission medium (i.e. wireless, WAN, POTS, etc.) in accordance with measured variables, predetermined parameters, associated with that medium, and properties of the data file itself. Therefore, Derby is concerned with merely routing packets in a network, once that network (interface) has been selected.

'370 patent application, Amendment 6/19/1998, p. 8.

ConnecTel argues this interpretation of the prosecution history is incorrect. ConnecTel contends the Applicant argued, without disavowing path selection within a network, that the combination of Derby and Kobayashi, other prior art, did not teach or suggest the claimed invention. ConnecTel is correct that the excerpt above is taken from an exchange with the Examiner in which the Applicant argued his invention was not obvious in light of Kobayashi and Derby. But ConnecTel misinterprets the exchange: "The Applicant clearly stated that Derby is only involved with the interhop transfers after the initial selection of services to be utilized, and that Derby performs such an interhop transfer analysis and determination in a different way from the Applicant's invention." *See* ConnecTel's Reply Brief, p. 5. Thus, ConnecTel contends the Applicant did not clearly disavow that the invention could be used within a network for routing packets.

The Applicant stated that "there is clearly no motivation to even combine the cited references. Even if one were to combine the references, the applicant's invention would not result." '370 patent application, Amendment 6/19/1998, p. 8. The Applicant distinguished Kobayashi because Kobayashi used static parameters to determine route selection and did not look at the properties of the file to be transferred. *Id.* at 7. Derby looked at the available bandwidth and network loads for path selection and also did not examine the data file properties or static parameters. *Id.* at 8. It was in this context that the Applicant stated:

> In fact, knowledge of properties of the data file being transferred is not even useful to Derby because Derby is interested in network packet switching, once the data file

> has in fact been formatted in packets and provided to the network. The applicant's invention is intended to select an appropriate transmission medium (i.e. wireless, WAN, POTS, etc.) in accordance with measured variables, predetermined parameters, associated with that medium, and properties of the data file itself. Therefore, Derby is concerned with merely routing packets in a network, once that network (interface) has been selected.

Id. In this exchange, the Applicant does not merely clearly disavow the scope of any claim but delineates the limits of the claimed invention. The Applicant clarifies that the "invention is intended to select and appropriate transmission medium (i.e. wireless, WAN, POTS, etc.)" rather than "routing packets in a network, once that network (interface) has been selected."

ConnecTel also argues that this view of the invention is incorrect since the specification teaches that all of the interfaces may be the same. *See* col. 4:2–4. As discussed above, this description in the specification is consistent with the Court's construction. The specification does teach that "any number of the aforementioned interfaces may be used alone or in any combination as required by the user." Col. 4:2–4. The specification then goes on to teach that the invention may be used to select from a number of common carriers such as MCI, AT&T, and SPRINT. Col. 4:4–8. A user may also use the invention to select the optimal wireless interface such as infrared, radio frequency, and the like. Col. 4:8–11. Thus, although the networks may all be of the same type, the invention is still used to select which of the networks is the optimal network.

Predetermined parameters

In its briefing, ConnecTel argued "predetermined parameters" should be construed to mean "those parameters whose values are fixed, vary over relatively long periods of time, or are set by external actions, e.g. user input." Cisco contended "predetermined parameters" "refers to parameters of the paths that are fixed and not measured." During the hearing, the parties agreed to construe "predetermined parameters" as "parameters of the paths that are stored in memory and not

measured." The Court agrees that this is an appropriate construction and adopts it.

Variable parameters* and *Measurable parameters

ConnecTel contends "variable parameters" and "measurable parameters" should be construed to mean "those parameters whose values can vary over relatively short periods of time." Cisco argues "variable parameters" and "measurable parameters" "refer[] to parameters of the paths that can vary and are measured." The parties' disagreement on this term is whether the variation in value must occur over short periods of time. ConnecTel argues that the variable parameters discussed in the preferred embodiment—$presentstate, $avgstate, $latency, $time, and $availbandwidth—vary over a short period of time. ConnecTel's limitation of "short periods of time" is vague and unsupported by the specification. Although the variable parameters described in the specification are likely to vary over short periods of time, there is no requirement in the claims or specification that they must vary over short, as opposed to long, periods of time. Accordingly, the Court rejects this limitation. The Court adopts Cisco's construction and construes "variable parameters" and "measurable parameters" to mean "parameters of the paths that can vary and are measured." This comports with the common meaning of the terms.

***Analyzing a property of the data file to be transferred* and similar phrases**

ConnecTel proposes that the Court construe "analyzing a property of the data file to be transferred" to mean "quantitatively or qualitatively observing a characteristic of the data file being transferred, e.g., size, security requirement not including a phone number." ConnecTel argues that one skilled in the art would interpret "analyzing" to mean "observing" and "observe" is synonymous with the plain meaning of "analyze," which is to "study or determine." ConnecTel also contends the relevant "properties of the data file" are found in the header or control information of data or a data

file. Furthermore, because the data properties include quantitative factors, such as data size, and qualitative factors, such as the type of file, analyzing a property of the data file involves observing such quantitative or qualitative factors.

Cisco contends "analyzing a property of the data file to be transferred" means "studying the data file itself, and does not include referencing a data packet header or destination information. The data file may be transmitted in any of various formats (a data file, data packets, encapsulated packets, or data streams)." During the hearing, ConnecTel conceded to the use of "studying" rather than "quantitatively or qualitatively observing." The Court modifies Cisco's proposed construction and construes "analyzing a property of the data file to be transferred" to mean "studying the data file itself but does not include referencing destination information. The data file may be transmitted in any of various formats (a data file, data packets, encapsulated packets, or data streams)."

In the specification, the Inventor defined "data file" to include "data file, data packets, encapsulated packets, or data streams." Col. 1:16–19 ("Data may be transmitted in any of various formats, such as a data file, data packets, encapsulated packets, or data streams (referred to herein as a data file)."). Thus, unless there is a clear disavowal in the file history, "analyzing a data file" must include analyzing a data packet. The Applicant's reference to Derby in the prosecution history does not show a clear disavowal that the term data file does not include "data packet." '370 patent application, Amendment 6/19/1998, p. 7–8. This portion of the file history directed to Derby is more properly interpreted toward distinguishing the difference between making packet decisions within a network and "the initial selection of the services to be utilized." *See id.* at 8. Thus, this portion of the file history impacts the construction of "telecommunication path," but it does not constitute a clear disavowal that the term "data file" no longer includes a "data packet" as stated in the

specification.

Although a data packet typically includes a header containing destination information, studying the data file does not include referencing destination information. During prosecution, the Applicant stated that neither Kobayashi or Derby "utilizes a property of the data file being transferred." *Id.* at 8. Kobayashi taught a method for connecting phone calls and thus utilized the destination telephone number in selecting the appropriate path. *Id.* at 7. Since Kobayashi used telephone numbers but did not use properties of the data file, the telephone number cannot be a property of the data file. Further, even if Kobayashi was extended to include a line terminal rather than a telephone, Kobayashi would still not utilize a property of the data file. *Id*. According to the Applicant, Derby was directed at routing packets within a network, which would necessarily require destination information, but Derby did not utilize properties of the data file. *Id.* at 7–8. Thus, destination information cannot be a property of the data file. Finally, Figure 1 depicts "Destination #" as separate from "Data File 30."

Accordingly, the Court construes "analyzing a property of the data file to be transferred" to mean "studying the data file itself but does not include referencing destination information. The data file may be transmitted in any of various formats (a data file, data packets, encapsulated packets, or data streams)." Since it was not clearly disavowed during prosecution, this includes analyzing a data packet. Because there is evidence of a clear disavowal during prosecution, "analyzing a property of the data file to be transferred" does not include referencing destination information.

***Measuring variable parameters* and similar phrases**

ConnecTel argues "measuring variable parameters" and similar phrases should be construed as "observing and quantifying a parameter whose value can vary over relatively short periods of time

at or about the time of transfer." Cisco contends the term should be construed to mean "in connection with the data file to be transferred, ascertaining the measurements of said variable parameters for each of said paths at or about the time of transfer of the data file." Thus, ConnecTel and Cisco agree that the measuring is done at or about the time of transfer, but disagree as to whether it is done connection with a particular data file to be transferred or whether it occurs in the background unrelated to the transfer of a data file.

The Court modifies Cisco's proposed construction and construes "measuring variable parameters" to mean "ascertaining the measurements of said variable parameters for each of said paths at or about the time of transfer." ConnecTel's construction incorporates its construction of "variable parameters." As that term has already been construed, it is unnecessary to reconstrue that term here. Neither the claims, the specification, nor the prosecution history require that the measurement of the variable parameters be done in connection with a data file to be transferred. The claims themselves do not require a certain order of the steps. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369-72 (Fed. Cir. 2003) (discussing proper application of the rule from *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1342-43 (Fed. Cir. 2003): "Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one. However, such a result can ensue when the method steps implicitly require that they be performed in the order written."). Cisco argues that the sequence of steps is implied by the nature of the invention itself. Specifically, Cisco argues that because the measurements are done in real-time at or about the time *the* data file is transferred, *see* col. 4:17–23, the measurements must be done in connection with a particular file to be transferred. Such a cause and effect relationship is not required for the measurements to be done if real-time. If the variable parameters were constantly measured, their

values would be in real-time as to any file to be transferred. Further, one of the variable parameters, $avgstate(i), is the "average of $presentstate(i) over prior five minute window." Col. 4:57–58. Thus, unless there is a five-minute delay between selecting the file for transfer and the actual transfer, the specification contemplates that the measurements of at least $avgstate(i) will be done without a connection to any particular data file to be transferred. Accordingly, the Court rejects Cisco's limitation that the measurements must be performed "in connection with the data file to be transferred."

***Analyzing variable and predetermined parameters* and similar phrases**

Although both parties originally proposed different constructions for this term, during the hearing they agreed it does not require construction in light of the other similar and related terms the Court will construe. The Court agrees.

***Determining which of said paths . . .* and similar phrases**

In its briefing, ConnecTel urged that this term be construed to mean "the process of evaluating and selecting the telecommunications path(s) that maximizes a set of criteria with respect to the path predetermined parameters, the path variable parameters, and the properties of the data to be transferred." In its briefing, Cisco argued the term should be construed as: "In connection with the data file to be transferred and at or about the time of transfer, evaluating and selecting (based upon a relative comparison, as opposed to a discrete yes/no inquiry) the best telecommunications path for transferring the file to the remote destination in accordance with said analyzed variable parameters and predetermined parameters and said analyzed data file property. The evaluating and selecting of the best telecommunications path does not include routing packets in a network, once that network has been selected." During the hearing, the parties agreed to a modified version of

Cisco's construction: "In connection with the data file to be transferred and at or about the time of transfer, evaluating and selecting (based upon a relative comparison, as opposed to a discrete yes/no inquiry) the telecommunications path that maximizes a set of criteria for transferring the file to the remote destination in accordance with said analyzed variable parameters and predetermined parameters and said analyzed data file property." The Court agrees with the parties' construction. ConnecTel and Cisco could not reach agreement as to whether the last sentence of Cisco's original proposed construction should be included. Cisco argues the last sentence is necessary to restate the nature of the invention. Because the last sentence of Cisco's original construction has already been addressed in the Court's construction of "telecommunications path," it is unnecessary here. Accordingly, the Court does not include it in the Court's construction.

The remote destination

In its briefing, ConnecTel proposed "the remote destination" be construed to mean "an intermediate or end destination of the user data/traffic." Cisco proposed "the remote destination" means "the endpoint to which the data file is to be transferred." During the hearing, the parties agreed that this construction hinges on the Court's construction of "telecommunications path" and whether "telecommunications path" refers to a network (or interface) or the routing path within a network or interface. Since the construction of "telecommunications path" will determine whether "the remote destination" includes intermediate destinations, the parties agreed this term does not require construction. The Court agrees.

Cost per unit time

Although both parties originally proposed different constructions for this term, during the hearing they agreed it does not require construction. The Court agrees.

Available

Although both parties originally proposed different constructions for this term, during the hearing they agreed it does not require construction. The Court agrees.

Means for measuring the value of a variable parameters associated with each of said telecommunications paths

ConnecTel and Cisco agree this term is subject to § 112 ¶ 6 and that the claimed function is "measuring the value of a variable parameter associated with each of said telecommunications paths." In their briefing, the parties identified similar corresponding structures that perform this function. During the hearing, they announced that they agree the corresponding structure is "the software utility that performs a ping test or show interface test (col. 7:49–64) or other techniques for determining latency known in the art as of October 31, 1996." The Court agrees.

Processor means . . . for determining which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said data file property, said predetermined telecommunications path parameters, and said measured variable parameters

ConnecTel proposes these terms be construed to mean "a processor that performs the process of evaluating and selecting the telecommunication path(s) that maximizes a set of criteria with respect to the path predetermined parameters, the path variable parameters, and the properties of the data to be transferred." ConnecTel argues that the term itself recites sufficient structure such that it is not subject to 35 U.S.C. § 112, ¶ 6. According to ConnecTel, a person of skill in the art would find that the word "processor" has a readily identifiable meaning that does not require resort to the specification for structure. However, if the Court determines the term is governed by § 112, ¶ 6, ConnecTel argues the term should not be restricted to the algorithm disclosed in the specification unless *WMS Gaming v. International Game Technology*, 184 F.3d 1339 (Fed. Cir. 1999), applies.

Cisco argues this term should be construed under 35 U.S.C. § 112, ¶ 6. Cisco contends the

claimed function is "determining which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said data file property, said predetermined telecommunications path parameters, and said measured variable parameters." According to Cisco, the proper construction of this function includes Cisco's proposed constructions for the "analyzing," "measuring," and "determining" steps. Cisco argues the structure corresponding to the claimed function is "a microprocessor programmed with the algorithms provided in the specification as set forth in col. 5, ln. 12-67, including the following equations, and also the corresponding tables and further description in columns 6 and 7:

$finalvalue(i) = $prevalue(i) + $currentvalue(i) where $prevalue(i)= $maxbandwidth(i) + $reliability(i)+$economy(i)+ $security(i)(1) and $currentvalue(i)=$economy(i) X $speed(i)+$avgstate(i) X 10 where $speed(i)=10,000-($datasize(i) $latency(i) X 100)(2) so that: $currentvalue(i)=$economy(i) (10,000-($datasize(i) X $latency(i) X 100)+$avgstate(I)."

Thus, the threshold construction issue is whether the term is a means-plus-function term subject to § 112, ¶ 6. ConnecTel argues that a "processor" is well known but does not cite any structure of the claim element apart from "processor" as structure. ConnecTel notes that the specification teaches the routing optimization block 26 may be implemented in a microprocessor. *See* col. 5:12–14. However, ConnecTel does not point to any other structure recited in the claim to take it out of 35 U.S.C. § 112, ¶ 6. ConnecTel ultimately relies on the argument that a "processor" by itself is sufficient to avoid the presumption of a means element. Other courts have found that a "processor" by itself is not sufficient structure to avoid § 112, ¶ 6. Most recently, in *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1248–49, 1253–54 (Fed. Cir. 2005), the Federal Circuit found "processing means" invoked § 112, ¶ 6.

Since "processor" is not adequate structure to take this claim out of the § 112, ¶ 6 requirements, the Court construes this term as a means-plus-function term under 35 U.S.C. § 112, ¶ 6. The function is "determining which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said data file property, said predetermined telecommunications path parameters, and said measured variable parameters" as those terms have been previously construed. The Court must next determine how much, if any, of the disclosed algorithm is required corresponding structure. Cisco argues the entire algorithm is required; ConnecTel argues the algorithm is not required unless *WMS Gaming* applies. As in *Harris*, the'307 patent teaches a microprocessor. *See* col. 5:12-14. Following *Harris*, the algorithm seems to require inclusion. *See Harris*, 417 F.3d at 1253–54; *WMS Gaming*, 184 F.3d at 1348-49. ConnecTel does not adequately rebut the application of *Harris* and *WMS Gaming* to this term.

The specification indicates that the algorithm "utilizes two main components comprising the parameters set forth in the Tables A and B above in varying combinations." Col. 5:12–16. These components are "a measure of an inherent efficiency and desirability of a particular telecommunications path" and a component that "is based in part upon real-time parameters that may exhibit a wide variance." Col. 5:16–18; 5:32–33. Cisco wants to incorporate the specific equations given in column 5. In *Harris*, the court stated "Aspects of this algorithm can vary based on implementation, as the specification implies." *Harris*, 417 F.3d at 1254. Accordingly, the court then excluded some details of the algorithm when the specification noted allowable variation. Similarly, the specification here states that the weighting of the parameters may vary. Col. 6:10-23. Further, the specification states, "In another form of parameter weighting, the user may also force the program to ignore certain parameters and focus on one parameter only in arriving at a routing

decision." Col. 6:28-39. The specification goes on to teach that "[o]ther permutations and variations of the above example can be easily derived by one of skill of the art." Col. 6:40-45. Accordingly, the specification does not restrict the algorithm to the specific equations given in the specification. The corresponding structure is a "processor implementing an algorithm that utilizes two main components comprising the parameters set forth in the Tables A and B above in varying combinations, the two components being (1) a measure of an inherent efficiency and desirability of a particular telecommunications path and (2) a component that is based in part upon real-time parameters that may exhibit a wide variance."

CONCLUSION

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. For ease of reference, the Court's claim interpretations are set forth in a table as Appendix B. The claims with the disputed terms in bold are set forth in Appendix A.

So ORDERED and SIGNED this 11th day of April, 2006.

LEONARD DAVIS
UNITED STATES DISTRICT JUDGE

APPENDIX A

U.S. PATENT NO. 6,016,307

1. In a telecommunications switching system comprising a plurality of interfaces, each of said interfaces interconnected with an associated **telecommunications path** capable of transferring a data file from a first memory to a remote destination, each of said telecommunications paths having **predetermined parameters** associated therewith stored in a second memory in said switching system and **variable parameters** associated therewith, a method of determining which of said plurality of telecommunications paths should be utilized for transferring the data file from said first memory, said method comprising the steps of:

a) **analyzing a property of the data file to be transferred**;

b) **measuring said variable parameters for each of said paths**;

c) **analyzing said measured variable parameters and said predetermined parameters**; and

d) **determining which of said paths provides an optimal set of characteristics for transferring the file to the remote destination in accordance with said analyzed variable parameters and predetermined parameters and said analyzed data file property**.

6. The method of claim 2 in which said telecommunications path predetermined parameters comprises the **cost per unit time of utilizing said path**.

12. The method of claim 1 comprising the additional step of first ascertaining if an interface is **available** prior to performing said analysis.

14. A telecommunications switching system comprising:

a) a first memory for holding a data file to be transferred to **a remote destination**, said **data file having at least one associated property**;

b) a plurality of interfaces coupled with said first memory, each of said interfaces interconnected with an associated **telecommunications path** capable of transferring the data file with the remote destination;

c) a second memory for storing **predetermined parameters** associated with each of said telecommunications paths;

d) **means for measuring the value of a variable parameter associated with each of said telecommunications paths**; and

e) **processor means operatively associated with said first and second memories and said variable parameter measuring means for determining which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said data file property, said predetermined telecommunications path parameters, and said measured variable parameters**.

15. The system of claim 14 further comprising a third memory for storing a set of user priorities regarding the transmission of data files, and **wherein said processor means determines which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said user priorities**.

U.S. PATENT NO. 6,144,641

1. In an apparatus comprising a plurality of interfaces, each of said interfaces interconnected with an associated **data path** capable of transferring data towards a remote destination, each of said data paths having **predetermined parameters** associated therewith stored in memory and **variable parameters** associated therewith, a method of determining which of said plurality of data paths should be utilized for transferring the data towards the remote destination, said method comprising the steps of:

a) **analyzing a property of the data to be transferred**;

b) **measuring a variable parameter for at least one path**;

c) **analyzing said measured variable parameter and said predetermined parameters**; and

d) **determining which of said paths provides an optimal set of characteristics for transferring the data towards the remote destination in accordance with said analyzed variable parameter, predetermined parameters, and analyzed data property**.

U.S. PATENT NO. 6,454,594

1. In a communications switching system comprising a plurality of interfaces, each of the interfaces interconnected with an associated **communications path** capable of transferring a data file to a remote destination, each of the communications paths having predetermined parameters associated therewith stored in a memory in the switching system and variable parameters associated therewith, a method of determining which of the plurality of communications paths should be utilized for transferring a data file, the method comprising the steps of:

a) **analyzing a property of the data file to be transferred**;

b) **measuring said variable parameters for each of said paths**;

c) **analyzing the measured variable parameters and the predetermined parameters**; and

d) **determining which of the paths provides an optimal set of characteristics for transferring the file to the remote destination in accordance with the analyzed variable parameters and the analyzed data file property.**

2. The method of claim 1 in which the determining step analyzes a set of programmed user priorities in **determining which of the paths provides the optimal set of characteristics for transferring the file to the remote destination.**

U.S. PATENT NO. 6,473,404

69. In an apparatus comprising a plurality of interfaces, each of said interfaces interconnected with an associated **data path** capable of transferring data towards a remote destination, each of said data paths having **predetermined parameters** associated therewith stored in a memory and **variable parameters** associated therewith, a method of servicing the data by examining the data and determining which of said plurality of data paths should be utilized for transferring the data towards the remote destination, said method comprising:

a) **analyzing a property of the data to be transferred**;

b) **measuring a first and second variable parameter for at least one path**;

c) **analyzing said measured first and second variable parameters and said predetermined parameters**;

d) **determining which of said paths provides an optimal set of characteristics for transferring the data towards the remote destination in accordance with said analyzed first variable parameter, predetermined parameters, and analyzed data property**;

e) determining whether said optimal data path is **available** according to said measured second variable parameter;

f) retaining the data in the memory if said optimal data path is not available;

g) transferring the data toward the remote destination;

h) suspending the data transfer if a request to service other data is received; and

i) resuming the data transfer.

APPENDIX B

Terms To Be Construed	Court's Construction
telecommunications path, data path, and **communications path** '307 patent, claims 1, 14 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	A transmission medium (a network type such as POTS, leased lines, mobile cellular networks, digital links, fiber optics, satellite links, and private and public packet switching networks such as the Internet).
predetermined parameters '307 patent, claims 1, 14 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	**AGREED:** Parameters of the paths that are stored in memory and not measured.
variable parameters and **measurable parameters** '307 patent, claims 1, 14 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	Parameters of the paths that can vary and are measured.
analyzing a property of the data file to be transferred and similar phrases '307 patent, claim 1 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	Studying the data file itself but does not include referencing destination information. The data file may be transmitted in any of various formats (a data file, data packets, encapsulated packets, or data streams).
measuring said variable parameters for each of said paths and similar phrases '307 patent, claim 1 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	Ascertaining the measurements of said variable parameters for each of said paths at or about the time of transfer.
analyzing said measured variable parameters and said predetermined parameters and similar phrases '307 patent, claim 1 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	**AGREED- no construction necessary**
determining which of said paths provides an optimal set of characteristics for transferring	**PARTIALLY AGREED:** In connection with the data file to be transferred and at or about the time of transfer, evaluating and selecting (based upon a relative comparison, as opposed to a discrete yes/no

Terms To Be Construed	Court's Construction
the file to the remote destination in accordance with said analyzed variable parameters and predetermined parameters and said analyzed data file property and similar phrases '307 patent, claims 1, 14 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	inquiry) the telecommunications path that maximizes a set of criteria for transferring the file to the remote destination in accordance with said analyzed variable parameters and predetermined parameters and said analyzed data file property.
the remote destination and similar phrases '307 patent, claims 1, 14 '594 patent, claim 1 '641 patent, claim 1 '404 patent, claim 69	**AGREED- no construction necessary**
cost per unit time of utilizing said path '307 patent, claim 6	**AGREED- no construction necessary**
available '307 patent, claim 12 '404 patent, claim 69	**AGREED- no construction necessary**
means for measuring the value of a variable parameter associated with each of said telecommunications paths '307 patent, claim 14	**AGREED-** **The claimed function is** measuring the value of a variable parameter associated with each of said telecommunications paths. **The structure corresponding with the claimed function is** the software utility that performs a ping test or show interface test (col. 17:49-64) or other techniques for determining latency known in the art as of October 31, 1996.
processor means operatively associated with said first and second memories and said variable parameter measuring means for determining which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said data file property, said predetermined telecommunications path parameters, and said measured variable parameters	**The claimed function is** determining which of said plurality of telecommunications paths should be utilized for transferring the data file in accordance with said data file property, said predetermined telecommunications path parameters, and said measured variable parameters. **The structure corresponding with the claimed function is** processor implementing an algorithm that utilizes two main components comprising the parameters set forth in the Tables A and B above in varying combinations, the two components being (1) a measure of an inherent efficiency and desirability of a particular telecommunications path and (2) a component that is based in part upon real-time parameters that may exhibit a wide variance.

Terms To Be Construed	Court's Construction
'307 patent, claims 14	